EAST Browser - L7: (15) 4 and 6 | US 4008341 A

File Edit View Tools Window Help

US-PAT-NO: 4008341

DOCUMENT-IDENTIFIER: US 4008341 A

TITLE: Curable liquid polymer compositions

--------- KWIC --------

Detailed Description Text - DETX (109):

The solid cured polythioether polymer products resulting from the instant invention have many and varied uses. Examples of some uses include but are not limited to adhesives; caulks; elastomeric sealants; coatings; encapsulating or potting compounds; liquid castable elastomers; thermoset resins; impregnants for fabric, cloth, fibrous webs and other porous substrates; laminating adhesives and coatings; mastics; glazing compounds; photoresists; fiberglass reinforced composites; sizing or surface finishing agents, filleting compounds; cure in place gasketing compounds; rocket fuel binders; filaments and fibers; foamable thermosetting resins or elastomers; molded articles such as gaskets, diaphragms, balloons; automobile tires, etc.

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EAST Browser - L7: (16) L and 6 | US 4880689 A | Tag: S | Doc: 2/16 (SORTED) | Format : KWIC

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US-PAT-NO: 4880689

DOCUMENT-IDENTIFIER: US 4880689 A

TITLE: Damage resistant decorative laminate

---------- KWIC ---------

Brief Summary Text - BSTX (16):

In its broadest aspect the method of the invention comprises forming a component sheet having on the surface thereof a composition consisting essentially of a thermosetting resin, substantially fully hydrolyzed polyvinyl alcohol, fumed amorphous silica, and particulate abrasive material having a hardness higher than that of silica; assembling said coated component sheet with a substrate; and subjecting the assembled component sheet and substrate to heat and pressure sufficient to consolidate said component sheet and substrate, to cure said resin to a thermoset condition and to form an exposed surface exhibiting mar resistance of less than 4% gloss change by the herein described test, and abrasion resistance greater than 3000 cycles (NEMA Wear) by the NEMA test LD 3-3.01.

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Brief Summary Text - BSTX (13):

It has now been found that a relatively simple and effective process is provided for chemically bonding a thermoset resin to a poly-p-xylylene substrate by exposing the poly-p-xylylene to a cold plasma in a confined region for a period of time sufficient to chemically modify the surface of the poly-p-xylylene exposed to the cold plasma, depositing an uncured liquid thermosetting resin over the chemically modified poly-p-xylylene surface ; and then heating the thermosetting resin and poly-p-xylylene at a temperature and time sufficient to both cure the thermosetting resin into a solid thermoset resin and chemically bond the chemically modified surface of the poly-p-xylylene to the thermoset resin in situ.

Detailed Description Text - DETX (2):

The basic process of the present invention may be more explicitly defined as a process for chemically bonding a thermoset resin to a poly-p-xylylene substrate comprising: providing a cold plasma within a confined region evacuated to a pressure lower than about 100 torr; exposing at least one surface of the poly-p-xylylene substrate directly to said plasma within said region for a period of time sufficient to incorporate oxygen-containing functional groups thereinto which contain active hydrogen atoms; depositing an uncured liquid thermosetting resin capable of chemically reacting with active hydrogen atoms over the plasma treated poly-p-xylylene surface ; and heating the thermosetting resin and poly-p-xylylene at a temperature at which the thermosetting resin

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EAST Browser - L5: (1 L6) L and S | US 200201

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[0014] The present invention provides a method for manufacturing a semiconductor package including the steps of: forming at least one curable resin layer: forming a package substrate having at least one cavity, the cavity having a top opening and receiving therein a semiconductor chip; placing the package substrate on the curable resin layer, with the top opening being closed by the curable resin layer; and curing the curable resin layer to form a cap member encapsulating the semiconductor chip in the cavity.

[0047] Thereafter, the curable resin layer 15a is heated from the bottom of the mold die 22 for two to three hours at a temperature of 200 degrees C. or below, preferably between 120 and 150 degrees C., for a thermosetting process. This provides the encapsulation structure shown in FIG. 10, without using an adhesive, wherein the curable resin layer 15a adhered onto the wall substrate 12 during the curing process absorbs a pressure rise due to the expansion of the air inside the cavity 13.

[0048] The curable resin layer 15a has a concave inner surface at each opening due to the pressure applied at the initial stage of the heating at which the curable resin layer 15a has a lower viscosity. In the encapsulation structure shown in FIG. 10, the top of the cured resin 15 adheres at the bottom of the wall substrate 12 during the curing step, whereby the cured resin 15 constitutes the cap member for each cavity 13. The bottom of the cured resin

Details Text Image HTML KWIC

TITLE: THERMOPLASTIC RESIN COMPOSITION AND SHEETS AND CARDS MADE FROM THE SAME

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[0133] The composition of the present invention can also contain other various additives as far as the object of the present invention is not impaired. These other additives include a reinforcing material such as glass fibers, carbon fibers, asbestos fibers, rock wool, calcium carbonate, quartz sand, bentonite, clay, wollastonite, barium sulfate, glass beads, mica and titanium oxide, filler, antioxidant (phosphorus based, sulfur based, etc.), ultraviolet absorbent, thermal stabilizer (hindered phenol based, etc.), lubricant, releasing agent, antistatic agent, anti-blocking agent, colorant including dye and pigment, flame retarder (halogen based, phosphorus based, etc.), flame retarding aid (antimony compound such as antimony trioxide, zirconium oxide, molybdenum oxide, etc.), foaming agent, crosslinking agent (e.g., polyepoxy compound, isocyanate compound, acid anhydride, etc.), etc. Furthermore, any other synthetic resin (e.g., polyamide resin, polystyrene resin, acrylic resin, polyethylene resin, ethylene/vinyl acetate copolymer, phenoxy resin, epoxy resin, silicone resin, etc.) can also be contained.

KWIC

File Edit View Tools Window Help

DOCUMENT-IDENTIFIER: US 20020142167 A1

TITLE: Underfill material for COF mounting and electronic components

---------- KWIC ---------

[0048] If desired, the epoxy resin composition can further contain appropriate amounts of various anti-foaming agents, silane coupling agents, pigments, and the like, particularly carbon black.

Details Text Image HTML KWIC

The finality of the OA mailed ____ is withdrawn in view of the new grounds of rejection below.

EAST Browser - L15: (37) 13 with 14 | US 20020140093 A1 | Tag: S |

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TITLE: Conductor bodies attached adhesive sheet, process for producing semiconductor device and semiconductor device

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Detail Description Paragraph - DETX (27):

[0057] A thermal activation latent epoxy resin curing agent is a curing agent of a type that does not react with epoxy resins at a room temperature but activates by a heat of a certain temperature or more and reacts with epoxy resins. As kinds (divided by activation processes) of thermal activation latent epoxy resin curing agents, there are those which generate active species (anion, cation) by a chemical reaction due to heating, those which are stably dispersed in an epoxy resin around a room temperature but become compatible and
dissolved in an epoxy resin at a high temperature to start a curing reaction, those which are a type of curing agent contained in molecular sieves which is released at a high temperature to start a curing reaction, and those encapsulated in a micro-capsule, etc. These thermal activation latent epoxy resin curing agents can be used alone or by combining different kinds, and among these, it is preferable to use dicyanamide, imidazole compound, or a mixture of the dicyanamide and imidazole compound.

Details Text Image HTML KWIC

PGPUB-DOCUMENT-NUMBER: 20020022681
DOCUMENT-IDENTIFIER: US 20020022681 A1
TITLE: Epoxy resin composition

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BSTX:
[0005] It is well known to add surfactants to epoxy resin compositions in order to reduce voids. Known surfactants are fluorochemical surfactants such as Florade FC-170C, FC-430 and FC-431 from 3M-Sumitomo Co., Ltd. and silicone surfactants such as KF351, KF945 and KF618 from Shin-Etsu Chemical Co., Ltd. However, where silicone plasticizers are added to epoxy resin compositions, surfactants commonly used as anti-foaming agents are not effective for inhibiting the formation of bubbles. It is impossible to completely remove voids in such silicone component-containing compositions. A study has not been made on the anti-foaming problem associated with the sealing methods including potting, COB and screen printing. It is merely attempted to reduce the viscosity or thixotropy of the resin in order to improve infiltration.

PGPUB-DOCUMENT-NUMBER: 20020001720
DOCUMENT-IDENTIFIER: US 20020001720 A1
TITLE: Electronic circuit device comprising an epoxy-modified aromatic vinyl-conjugated diene block copolymer

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BSTX:
[0009] Adhesives useful in electronic packaging comprising liquid epoxy resins and an added functionalized resin have been described in EP 387066 (see also U.S. Pat. No. 5,843,251). In order to extend the shelf life of the adhesives, a micro-capsule type curing agent is required in the formulation. Functionalized styrene--diene block copolymers are among the functionalized resins named and not exemplified, wherein the functional group can be an epoxy group. The added functionalized resin can be present in the amount of from 20 to 80% by weight. The adhesives can be processed into adhesive tapes that can be used to electrically connect circuits on chips and wiring substrates. Performance of the adhesives under conditions of JEDEC Level 1 is not described.